

IN THE CLAIMS:

Please cancel claims 1-46 without prejudice or disclaimer, and substitute new
Claims 47-94 therefor as follows:

Claims 1-46 (Cancelled).

47. (New) A cable comprising:

at least one electrical conductor; and

at least one extruded covering layer based on a thermoplastic polymer material
in admixture with a dielectric liquid, wherein

the thermoplastic polymer material is selected from:

(a) at least one propylene homopolymer or at least one copolymer of
propylene with at least one olefin comonomer selected from ethylene and an α -olefin
other than propylene, said homopolymer or copolymer having a melting point greater
than or equal to 130°C and a melting enthalpy of from 20 J/g to 100 J/g; or

(b) a mechanical mixture comprising at least one propylene
homopolymer or copolymer (a) and (c) at least one elastomeric copolymer of ethylene
with at least one aliphatic α -olefin, and optionally a polyene;

the concentration by weight of said dielectric liquid in the thermoplastic polymer
material is lower than the saturation concentration of said dielectric liquid in the
thermoplastic polymer material; and

said dielectric liquid has the following characteristics:

an amount of polar compound lower than or equal to 2.5% by weight with
respect to the total weight of the dielectric liquid;

a melting point or a pour point lower than 80°C; and
a ratio of number of aromatic carbon atoms with respect to the total
number of carbon atoms lower than 0.6, when the dielectric liquid is aromatic.

48. (New) The cable according to claim 47, wherein the propylene
homopolymer or copolymer (a) has a melting point of 140°C to 170°C.

49. (New) The cable according to claim 47, wherein the propylene
homopolymer or copolymer (a) has a melting enthalpy of 30 J/g to 85 J/g.

50. (New) The cable according to claim 47, wherein the propylene
homopolymer or copolymer (a) has a flexural modulus, measured according to ASTM
standard D790, at room temperature, of 30 MPa to 1400 MPa.

51. (New) The cable according to claim 50, wherein the propylene
homopolymer or copolymer (a) has a flexural modulus, measured according to ASTM
standard D790, at room temperature, of 60 MPa to 1000 MPa.

52. (New) The cable according to claim 47, wherein the propylene
homopolymer or copolymer (a) has a melt flow index (MFI), measured at 230°C with a
load of 21.6 N according to ASTM standard D1238/L, of 0.05 dg/min to 10.0 dg/min.

53. (New) The cable according to claim 52, wherein the propylene
homopolymer or copolymer (a) has a melt flow index (MFI), measured at 230°C with a
load of 21.6 N according to ASTM standard D1238/L, of 0.4 dg/min to 5.0 dg/min.

54. (New) The cable according to claim 47, wherein in the propylene
copolymer (a) the olefin comonomer is present in a quantity of less than or equal to 15
mol %.

55. (New) The cable according to claim 54, wherein in the propylene copolymer (a) the olefin comonomer is present in a quantity of less than or equal to 10 mol %.

56. (New) The cable according to claim 47, wherein in the propylene copolymer (a) the olefin comonomer is ethylene or an α -olefin of formula $\text{CH}_2=\text{CH}-\text{R}$, where R is a linear or branched $\text{C}_2\text{-C}_{10}$ alkyl.

57. (New) The cable according to claim 56, wherein the α -olefin is selected from: 1-butene, 1-pentene, 4-methyl-1-pentene, 1-hexene, 1-octene, 1-decene, 1-dodecene, or mixtures thereof.

58. (New) The cable according to claim 47, wherein the propylene homopolymer or copolymer (a) is selected from:

(a₁) a propylene homopolymer or a copolymer of propylene with at least one olefin comonomer selected from ethylene and an α -olefin other than propylene, having a flexural modulus generally of 30 MPa to 900 MPa; or

(a₂) a heterophase copolymer comprising a thermoplastic phase based on propylene and an elastomeric phase based on ethylene copolymerized with an α -olefin.

59. (New) The cable according to claim 58, wherein the propylene homopolymer or copolymer of (a₁) has a melting point of 140°C to 170°C.

60. (New) The cable according to claim 58, wherein the propylene homopolymer or copolymer of (a₁) has a melting enthalpy of 30 J/g to 80 J/g.

61. (New) The cable according to claim 58, wherein the propylene homopolymer or copolymer of (a₁) has a fraction soluble in boiling diethyl ether in an

amount of less than or equal to 12 wt%, having a melting enthalpy of less than or equal to 4 J/g.

62. (New) The cable according to claim 58, wherein the propylene homopolymer or copolymer of (a₁) has a fraction soluble in boiling n-heptane in an amount of 15 wt% to 60 wt%, having a melting enthalpy of from 10 J/g to 40 J/g.

63. (New) The cable according to claim 58, wherein the propylene homopolymer or copolymer of (a₁) has a fraction insoluble in boiling n-heptane in an amount of 40 wt% to 85 wt%, having a melting enthalpy of greater than or equal to 45 J/g.

64. (New) The cable according to claim 58, wherein the α -olefin in the elastomeric phase of a heterophase copolymer of (a₂) is propylene.

65. (New) The cable according to claim 58, wherein the heterophase copolymer of (a₂) is a heterophase copolymer in which the elastomeric phase consists of an elastomeric copolymer of ethylene and propylene comprising 15 wt% to 50 wt% of ethylene and 50 wt% to 85 wt% of propylene with respect to the weight of the elastomeric phase.

66. (New) The cable according to claim 47, wherein the elastomeric copolymer of ethylene (c) has a melting enthalpy of less than 30 J/g.

67. (New) The cable according to claim 47, wherein the quantity of the elastomeric copolymer (c) is less than 70% with respect to the total weight of the thermoplastic base material.

68. (New) The cable according to claim 47 wherein the aliphatic α -olefin in the elastomeric copolymer of ethylene (c) is an olefin of formula $\text{CH}_2=\text{CH}-\text{R}$, in which R represents a linear or branched alkyl group containing from 1 to 12 carbon atoms.

69. (New) The cable according to claim 68, wherein the aliphatic α -olefin is selected from propylene, 1-butene, isobutylene, 1-pentene, 4-methyl-1-pentene, 1-hexene, 1-octene, 1-dodecene, or mixtures thereof.

70. (New) The cable according to claim 69, wherein the aliphatic α -olefin is selected from propylene, 1-hexene, and 1-octene.

71. (New) The cable according to claim 47, wherein the polyene in the elastomeric copolymer of ethylene (c) is a conjugated or non-conjugated diene, triene or tetraene.

72. (New) The cable according to claim 71, wherein the polyene is a diene.

73. (New) The cable according to claim 47, wherein the elastomeric copolymer of ethylene (c) is selected from:

(c₁) copolymers having the following monomer composition: 35 mol%-90 mol% of ethylene; 10 mol%-65 mol% of an aliphatic α -olefin; and 0 mol%-10 mol% of a polyene; and

(c₂) copolymers having the following monomer composition: 75 mol%-97 mol% of ethylene; 3 mol%-25 mol% of an aliphatic α -olefin; and 0 mol%-5 mol% of a polyene.

74. (New) The cable according to claim 47, wherein the dielectric liquid comprises an amount of polar compound between 0.1 wt% and 2.3 wt%.

75. (New) The cable according to claim 47, wherein the dielectric liquid has a melting point or a pour point between -130°C and +80°C.

76. (New) The cable according to claim 47, wherein the dielectric liquid has a ratio of number of aromatic carbon atoms with respect to the total number of carbon atoms between 0.01 and 0.4.

77. (New) The cable according to claim 47, wherein the dielectric liquid has a dielectric constant, at 25°C, less than or equal to 3.5 (measured in accordance with IEC 247).

78. (New) The cable according to claim 47, wherein the dielectric liquid has a viscosity, at 40°C, between 10 cSt and 800 cSt (measured according to ASTM standard D445-03).

79. (New) The cable according to claim 78, wherein the dielectric liquid has a viscosity, at 40°C, between 20 cSt and 500 cSt (measured according to ASTM standard D445-03).

80. (New) The cable according to claim 47, wherein the dielectric liquid is selected from: mineral oils, naphthenic oils, aromatic oils, paraffinic oils, polyaromatic oils, mineral oils optionally containing at least one heteroatom selected from oxygen, nitrogen or sulphur; liquid paraffins; vegetable oils, soybean oil, linseed oil, castor oil; oligomeric aromatic polyolefins; paraffinic waxes, polyethylene waxes, polypropylene waxes; synthetic oils, silicone oils, alkyl benzenes, dodecylbenzene, di(octylbenzyl) toluene, aliphatic esters, tetraesters of pentaerythritol, esters of sebacic acid, phthalic acid esters, olefin oligomers, optionally hydrogenated polybutenes or polyisobutenes; or mixtures thereof.

81. (New) The cable according to claim 80, wherein the dielectric liquid is selected from paraffinic oils and naphthenic oils.

82. (New) The cable according to claim 47, wherein the weight ratio of dielectric liquid to thermoplastic polymer material is between 1:99 and 25:75.

83. (New) The cable according to claim 82, wherein the weight ratio of dielectric liquid to thermoplastic polymer material is between 2:98 and 20:80.

84. (New) The cable according to claim 83, wherein the weight ratio of dielectric liquid to thermoplastic polymer material is between 3:97 and 10:90.

85. (New) The cable according to claim 47, wherein the thermoplastic polymer material is selected from propylene homopolymers or copolymers comprising at least 40 wt% of amorphous phase, with respect to the total polymer weight.

86. (New) The cable according to claim 47, wherein the extruded covering layer based on said thermoplastic polymer material in admixture with said dielectric liquid is an electrically insulating layer.

87. (New) The cable according to claim 47, wherein the extruded covering layer based on said thermoplastic polymer material in admixture with said dielectric liquid is a semiconductive layer.

88. (New) A polymer composition comprising: a thermoplastic polymer material in admixture with a dielectric liquid, wherein: said thermoplastic polymer material is selected from:

(a) at least one propylene homopolymer or at least one copolymer of propylene with at least one olefin comonomer selected from ethylene and an α -olefin other than propylene, said homopolymer or copolymer having a melting point greater than or equal to 130°C and a melting enthalpy of from 20 J/g to 100 J/g; and

(b) a mechanical mixture comprising at least one propylene homopolymer or copolymer (a) and (c) at least one elastomeric copolymer of ethylene with at least one aliphatic α -olefin, and optionally a polyene;

the concentration by weight of said dielectric liquid in the thermoplastic polymer material is lower than the saturation concentration of said dielectric liquid in said thermoplastic polymer material; and

said dielectric liquid has the following characteristics:

an amount of polar compound lower than or equal to 2.5% by weight with respect to the total weight of the dielectric liquid;

a melting point or a pour point lower than 80°C; and

a ratio of number of aromatic carbon atoms with respect to the total number of carbon atoms lower than 0.6, when the dielectric liquid is aromatic.

89. (New) The polymer composition according to claim 88, wherein the propylene homopolymer or copolymer of propylene (a) has at least one of the properties: a flexural modulus, measured according to ASTM standard D790, at room temperature, from 30 MPa to 1400 MPa, or a melt flow index (MFI), measured at 230°C with a load of 21.6 N according to ASTM standard D1238/L, from 0.05 dg/min to 10.0 dg/min.

90. (New) The polymer composition according to claim 88, wherein the propylene homopolymer or copolymer (a) is selected from:

(a₁) a propylene homopolymer or a copolymer of propylene with at least one olefin comonomer selected from ethylene and an α -olefin other than propylene, having a flexural modulus generally of from 30 MPa to 900 MPa; and

(a₂) a heterophase copolymer comprising a thermoplastic phase based on propylene and an elastomeric phase based on ethylene copolymerized with an α -olefin.

91. (New) The polymer composition according to claim 88, wherein the elastomeric copolymer of ethylene (c) is selected from:

(c₁) copolymers having the following monomer composition: 35 mol%-90 mol% of ethylene; 10 mol%-65 mol% of an aliphatic α -olefin; and 0 mol%-10 mol% of a polyene; and

(c₂) copolymers having the following monomer composition: 75 mol%-97 mol% of ethylene; 3 mol%-25 mol% of an aliphatic α -olefin; and 0 mol%-5 mol% of a polyene.

92. (New) The polymer composition according to claim 88, wherein the dielectric liquid is selected from: mineral oils, naphthenic oils, aromatic oils, paraffinic oils, polyaromatic oils, mineral oils optionally containing at least one heteroatom selected from oxygen, nitrogen or sulphur; liquid paraffins; vegetable oils, soybean oil, linseed oil, castor oil; oligomeric aromatic polyolefins; paraffinic waxes, polyethylene waxes, polypropylene waxes; synthetic oils, silicone oils, alkyl benzenes dodecylbenzene, di(octylbenzyl) toluene, aliphatic esters, tetraesters of pentaerythritol, esters of sebacic acid, phthalic acid esters, olefin oligomers, optionally hydrogenated polybutenes or polyisobutenes or mixtures thereof.

93. (New) A cable covering layer comprising the polymer composition according to claim 88, wherein the thermoplastic polymer material in admixture with the dielectric liquid is electrically insulating.

94. (New) A cable covering layer comprising the polymer composition according to claim 88, wherein the thermoplastic polymer material in admixture with the dielectric liquid is semiconductive.